

IN THE CLAIMS

1. (Currently Amended) A method of recognizing a fingerprint comprising:
detecting the fingerprint;
digitizing the fingerprint;
subtracting a digitized background from the fingerprint, resulting in a difference
print;
sending the difference print to a computer system to perform a match to
identifying an individual associated with the difference fingerprint;
receiving extracted features from the computer system; and
confirming the match on the sensor, if the computer system indicated a match.
2. (Original) The method of claim 1 further comprising:
detecting a background; and
digitizing the background, resulting in the digitized background.
3. (Original) The method of claim 1 further comprising:
initializing a fingerprint recognition system when the fingerprint recognition
system is initially turned on;
detecting a first background when the fingerprint recognition system is being
initialized;
digitizing the first background; and
detecting a new background after the fingerprint is detected; and
digitizing the new background.

4. (New) The method of claim 1, wherein a computing intensive match of the individual is performed on the computer system, and the sensor performs a validation requiring little computing power.

5. (New) The method of claim 1, further comprising:
receiving a final decision on the match from the sensor, such that the fingerprint isn't validated until the sensor's final decision is received.

6. (New) The method of claim 1, wherein the confirming the match on the sensor occurs on a secure processor within the sensor.

7. (New) The method of claim 1, further comprising:
updating a template in a database if the sensor confirmed the match.

8. (New) The method of claim 1, further comprising:
returning a signed template for final verification to the computer system.

9. (New) The method of claim 1, further comprising:
wherein the sensor confirms intermediate data, and the final verification is performed on the computer system.

10. (New) A biometric sensor coupled to a computer system, the biometric sensor comprising:

a sensing unit to detect a biometric;

a subtraction logic to subtract a digitized background from the fingerprint,

resulting in a difference print;

a connection to securely transmit the difference to the computer system for authentication and to receive a preliminary match from the computer system; and

a decision making unit to perform verification of the preliminary match and make a final decision on whether the biometric is authenticated.

11. (New) The biometric sensor of claim 10, wherein a computing intensive match of the individual is performed on the computer system, and the sensor performs a validation requiring little computing power.

12. (New) The biometric sensor of claim 10, wherein the decision making unit comprises a secure processor within the sensor.

13. (New) The biometric sensor of claim 10, further comprising:
the decision making unit to send a notification to the computer system to update the biometric template when the verification was successful.

14. (New) The biometric sensor of claim 13, wherein the updating of the biometric template comprises replacing the biometric template currently stored on the computer system with the new biometric template.

15. (New) The biometric sensor of claim 13, wherein the updating of the fingerprint template comprises adding additional information to an existing template.